



# Changes in Neighborhood-Level Concentrated Disadvantage and Social Networks Among Older Americans

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## Abstract

Close social networks provide older persons with resources, including social support, that maintain their well-being. While scholarship shows how networks change over time, a dearth of research investigates changing social contexts as causes of network dynamics. Using the first two waves of the National Social Life, Health, and Aging Project survey ( $N = 1,776$ ), this study shows how rising neighborhood-level concentrated disadvantage through the Great Recession of 2007–2009 was associated with smaller close networks, largely due to fewer new close ties gained, among older Americans. Worsening neighborhood circumstances pose obstacles to older residents' acquisition of new close ties, including heightened fear, lower generalized trust, stress and depression, and declines in local institutions that attract both residents and nonresidents.

## Keywords

social networks, aging, neighborhoods, concentrated disadvantage, social disorganization theory, the Great Recession

## Introduction

The past few decades of social scientific research have shown the consequentiality of social networks for people and communities (Brady et al., 2020; Cherry et al., 2013; Krinsky & Crossley, 2014). Among older persons undergoing health declines and role losses, including through retirement and widowhood, having many close ties characterized by frequent interactions and social support protects health (Charles & Carstensen, 2010; Cornwell et al., 2008; Rook, 2009).

The realization that networks change over time, including through turnover (loss and addition of ties), has led to increased focus on the causes and consequences of network changes (Cornwell, 2015; Snijders & Doreian, 2010). Networks change through life transitions, including common later life events, such as retirement, widowhood, residential relocation, and health decline (Cornwell, 2009; Cornwell & Laumann, 2011; Cornwell et al., 2008). This study investigates the effects of community-level changes.

Close network turnover affects well-being when it reconfigures the norms, expectations, and influences to which one is exposed, causing malintegration (Cornwell, 2015). In addition, loss of valued relationships causes suffering (Steger & Kashdan, 2010). However, for older adults especially, new strong ties facilitate physical, social, and mental activity; promote social embeddedness; and broaden one's accessible social support (Cornwell & Laumann, 2015; Kemp et al., 2012).

Older adults show unique network dynamics. Socioemotional selectivity theory suggests that reduced time horizons in later life cause a refocusing of goals around present-moment emotional satisfaction, rather than future socioeconomic success (Carstensen, 1992; Charles & Carstensen, 2010). Older adults often shed peripheral ties in favor of closer interactions with strong, emotionally satisfying ties (Carstensen, 1992; Charles & Carstensen, 2010). However, older persons often lose close ties, including from network members' deaths, retirement and separation from coworkers, and residential relocation (Charles & Carstensen, 2010; Greenfield & Russell, 2011; Rook, 2009). Those who do not replace these lost close ties might lack social support and face isolation (Charles & Carstensen, 2010; Rook, 2009).

However, older adults face challenges in gaining close ties, including functional limitations (Lawton & Nahemow, 1973), widowhood and retirement (Cornwell et al., 2008),

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and fewer ties providing “bridges” to new people (Rook, 2009). Furthermore, strengthening weaker relationships conflicts with their preferences for interactions with close contacts (Rook, 2009).

Among causes of network dynamics, sociospatial circumstances have been neglected. Although studies show that residents of disadvantaged neighborhoods show less community engagement and form fewer new relationships (Van Eijk, 2010; York Cornwell & Behler, 2015), this research has seldom examined individuals in a dynamic community context. Although case studies of individuals within specific gentrifying neighborhoods exist (e.g., DeSena, 2006), our knowledge is limited by a lack of research examining how neighborhood changes cause network turnover using representative and comprehensive data from many neighborhoods. This study helps fill this gap.

## Literature Review

### *Theoretical Perspectives*

This study uses social disorganization theory as an orienting framework. According to this theory, unfavorable economic circumstances cause declines in the neighborhood institutions and informal networks that control community members' behavior while enhancing their ability to act in their common interests (Ansari, 2013). The resulting criminal and delinquent behavior lead residents to remain within their homes, socialize only with their strongest ties, and avoid community engagement while creating generalized distrust of both neighborhood residents and nonresidents (Aneshensel, 2009). This disorganization reduces neighborhoods' attractiveness to potential immigrants and residents' relatives and friends, who might be reluctant to visit their threatening neighborhoods (York Cornwell & Behler, 2015).

These declines lead to stress and depression (Kim, 2010), which compromise residents' ability and motivation to develop and strengthen relationships, both within and outside of their neighborhoods (York Cornwell & Behler, 2015). In addition, depression leads to unattractive behaviors that reduce one's social desirability (Schaefer et al., 2011).

As local gathering places, including recreational venues, churches, and senior centers, weaken within declining neighborhoods (Sampson, 2012), residents lose opportunities to develop relationships (Glass & Balfour, 2003). As these institutions also attract nonresidents, both local and nonlocal ties are compromised (Van Eijk, 2010). As older persons are likely to have numerous ties with relatives and friends living outside their neighborhoods, both are important.

Whether due to retirement, reduced functionality, or other life course developments, older persons show heightened spatial confinement (Glass & Balfour, 2003), which exacerbates these neighborhood effects. Furthermore, for older persons who have lost important roles, including through retirement

or widowhood, neighborhood involvements are substitutes (Cornwell et al., 2008), increasing dependence upon the immediate environment (Lawton & Nahemow, 1973).

Stable and changing neighborhood circumstances should be distinguished. Under stable neighborhood disadvantage, already adapted older residents might show limited close network turnover. However, exposure to worsened neighborhood circumstances to which one is unadjusted might compromise older residents' development of local and nonlocal relationships.

### *Effects Upon Strong and Weak Ties*

Scholarship suggests that disadvantaged communities' residents tend to have larger networks of strong ties and smaller networks of weaker connections (e.g., Curley, 2005; Gilchrist & Kyprianou, 2011; MacDonald et al., 2005). Stack's (1974) ethnography showed how residents of a disadvantaged urban American community profited from large networks of strong ties characterized by mutual rights and obligations. These networks were key to survival and happiness under circumstances of deprivation and discrimination (Stack, 1974).

Smaller networks of weaker ties within disadvantaged communities are attributable to processes of social disorganization that impede forming new acquaintanceships. As new close ties often emerge through strengthening earlier weaker relationships (Elfring & Hulsink, 2007; Ihm & Castillo, 2017; Lorenzen, 2007), worsening communities can prevent development of *new* strong ties, even among residents with sizable close networks.

### *Neighborhood Change Through the Great Recession of 2007–2009*

This study's context is the Great Recession of 2007–2009, which was the most extensive global economic shock since the 1930s Great Depression (Meltzer et al., 2013). This economic shock involved the collapse of the property market, causing severe losses within the financial sector and an acute recession during which the median American family's net worth decreased by 40% (Meltzer et al., 2013).

Through this recession, the average American neighborhood saw a 4 percentage point rise in unemployment rate, a 1 percentage point increase in rate of abandoned homes, and a 2 percentage point rise in poverty rate (Owens & Sampson, 2013). Neighborhoods that were disadvantaged or included high concentrations of racial minorities or immigrants pre-recession were harder hit (Owens & Sampson, 2013), contributing to substantial variability in extent of decline (Kneebone & Holmes, 2016).

Important neighborhood processes underlay the community-level consequences. Higher home foreclosure rates and decreasing home values caused neighborhood-level externalities that hampered social cohesion, decreased homes'

upkeep, and increased criminal activity (Lerman & Zhang, 2012). Furthermore, many prosperous neighborhoods' affluence decreased (Solari, 2012).

### Research Questions and Hypotheses

This study asks how changing neighborhood conditions through this recession affected the sizes of and turnover within older residents' close networks. Based on social disorganization theory, it hypothesizes that rising neighborhood-level concentrated disadvantage caused smaller close networks, less gain of close ties, and more loss of close ties.

### Research Design

#### Data Set and Sample

This study employed individual-level variables from the National Social Life, Health, and Aging Project (NSHAP) survey. Developed through a complex multistage area probability sampling design, this longitudinal panel study of a representative sample of older Americans focuses on health, well-being, and relationships. Wave 1 (2005–2006) involved 3,005 respondents from 57 to 85 years of age (75.5% response rate), 75.2% ( $n = 2,261$ ) of whom participated in Wave 2 (2010–2011). The first two waves' timing permits analyses of the recession's short-term effects.

To study the effects of neighborhood changes, only respondents not changing census tracts between the two waves were investigated ( $n = 1,788$ ). In addition, this helped rule out the prospect that some respondents experienced pronounced network turnover only because of residential relocation. In accordance with other scholars (e.g., Estabrooks et al., 2003), neighborhoods were approximated through census tracts, which are "small, relatively permanent statistical subdivisions of a county or equivalent entity . . . Census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people" (United States Census Bureau, 2010, p. A-12). Respondents were linked with their census tracts through protected geodata obtained from the National Opinion Research Center via special contractual arrangements. This study included 387 census tracts. On average, there were 4.59 respondents per census tract (minimum = 1, maximum = 24).

All Wave 1 census tract-level variables were obtained from the 2000 Decennial Census. The 2006–2010 American Community Survey (ACS) provided all Wave 2 census tract-level variables; 2006 to 2010 data were averaged as each individual year included too few respondents per census tract (each census tract was assessed at all years from 2006 to 2010). Because of data limitations, the 2000 Decennial Census is the most effective option for Wave 1, whereas the 2010 Decennial Census could not be used for Wave 2. Regarding the former, there are no alternative census tract-level ACS data between 2000 and 2005. Concerning the

latter, the 2010 Decennial Census does not include all six items of this study's concentrated disadvantage index (see below). The 2006 to 2010 ACS is the most effective data set for Wave 2 as there are no alternative census tract-level ACS data that do not extend beyond 2010 (an upper limit to avoid associating an outcome [close network dynamics] with a cause [concentrated disadvantage] from later in time).

Respondents retained over time had more close ties, were younger, were more likely married, had longer neighborhood residence, were more educated, were more likely employed, had more household assets, were healthier, and more frequently attended religious services than those who moved or could not be reinterviewed. There were no other significant differences in this study's variables.

#### Dependent Variables

This study's outcomes denote size of and turnover within close networks. In response to "Looking back over the last 12 months, who are the people with whom you most often discussed things that were important to you?" respondents listed up to five close ties. If left off this list, one's partner could serve as a sixth tie. Respondents were then asked whether they had any other close contacts, providing a seventh possible tie. Close networks spanned from zero to seven members. Respondents reported every Wave 2 tie included in Wave 1 and vice versa, allowing counts of new and lost close ties (network turnover).

#### Independent Variable

This study employed the index of census tract-level concentrated disadvantage developed by Sampson et al. (1997), based on percentage of the population below the poverty line, households on public assistance, female-headed households, individuals unemployed, individuals below 18 years of age, and non-White individuals. This index had high internal reliability (Cronbach's  $\alpha$ : Wave 1 = .91; Wave 2 = .84). Exploratory factor analyses showed that in both waves, these six items formed one factor (Kaiser criterion) and further provided factor loadings for each item at each wave. This index was created by standardizing all items, multiplying each by its Wave 1 factor loading, and averaging these six scores, separately by wave. This study's focus was change in concentrated disadvantage, computed by subtracting Wave 2 scores by Wave 1 scores. A confirmatory factor analysis revealed that the factor structure of these six items significantly differed between the two waves; a factor structure presents the correlational relationships between a group of variables used to develop a latent variable. Because results did not substantively differ when applying the first- or second-wave factor loadings to both waves, the Wave 1 factor loadings were employed.

## Control Variables

All contextual- and individual-level control variables were from Wave 1. This study postulates that the Great Recession may have been the underlying cause of both personal and neighborhood misfortunes that affected close networks. The full causal effect, through both individual and contextual mechanisms, is of interest; no Wave 2 variables were controlled to avoid blocking potential pathways.

At the census tract level, population density (persons per square mile; logged to reduce right skew), location within a metropolitan statistical area (MSA; reference category = not within an MSA), and residential instability (proportions of residents living in different homes in the years 2000 and 1995) were controlled. Because the recession more heavily affected already disadvantaged neighborhoods, Wave 1 concentrated disadvantage was controlled.

Numerous respondent-level variables were controlled as neighborhood-level variables might simply be aggregates of individual-level characteristics. These included sociodemographics: gender (ref. = men), age (divided by 10 for more substantial incidence-rate ratios [IRRs]), race/ethnicity (White [ref.], African American, Latino, other), education (no high school diploma [ref.], high school diploma, university degree), and total household assets (logged to reduce right skew). Years of residence in one's local area were controlled as they affect ties with neighbors (Kasarda & Janowitz, 1974). Employment (working for pay [ref.], retired, not working for reasons other than retirement) and marital circumstances (married [ref.], living with a partner, separated, divorced, widowed, never married) were controlled as they affect networks (Börsch-Supan & Schuth, 2013; Cornwell, 2009; Cornwell et al., 2008; Shin et al., 2019).

Health variables were controlled as they impact networks (Sluzki, 2010). Self-rated physical health was on a continuous scale (1 = *poor* to 5 = *excellent*). Beyond being powerful predictors of mortality (Idler & Benyamini, 1997), self-rated overall health variables have high reliability and validity and have been recommended for research by the World Health Organization, the United States Centers for Disease Control, and the European Commission (Salomon et al., 2009).

A continuous index of functional health problems was developed from average scores on seven activities of daily living (walking across a room, walking one block, bathing, dressing, getting in/out of bed, eating, using toilet; 0 = *no difficulty* to 3 = *unable to do*). This index held high internal reliability (Cronbach's  $\alpha > .80$ ). This measure is an earlier validated scale and physical disability is a strong predictor of future health and mortality (Smith et al., 1986).

A continuous index of depressive symptoms was created through 10 items from the 11-item short form version of the Center for Epidemiologic Studies Depression Scale (CES-D; a measure of loneliness was excluded as it implicates interactions within close networks). These 10 items included the

extents to which respondents felt depressed, had restless sleep, did not feel like eating, could not get going, and so on, over the last week (1 = *rarely or none of the time* to 4 = *most of the time*). Two items denoting less depression were reverse coded. This index was developed through averaging standardized scores on all 10 items (high internal reliability: Cronbach's  $\alpha > .70$ ). Radloff (1977) emphasized the CES-D's high reliability, validity, and internal consistency.

Numerous social connectedness variables likely to affect close network dynamics were controlled. For each close tie, respondents reported frequency of contact (1 = *less than once a year* to 8 = *every day*) and emotional closeness (1 = *not very close* to 4 = *extremely close*), both of which were averaged across all ties. The proportion of one's close network that was relatives was controlled. Further controlled was attendance at religious services (0 = *once or more per week* [ref.], 1 = *about once per month*, 2 = *less than once per year* to *several times per year*, and 3 = *never*).

## Analysis

This study examined change in neighborhood-level concentrated disadvantage as a focal influence upon close network dynamics. The first model regressed Wave 2 close network size upon Wave 1 close network size (dummy variable categories), both Wave 1 and change in concentrated disadvantage, and all control variables. Controlling for the dependent variable at Wave 1 (a "conditional change panel model") allows estimation of how predictors are associated with a second wave outcome for fixed initial values of this outcome (Finkel, 1995). This permits analyses of *changes* in an outcome and reduces concerns with selection effects. The second and third models repeated the first analysis with new close ties and lost close ties as the dependent variables, respectively. Because Wave 1 close network size limited the ties potentially lost, it was included as an exposure term (thereby controlling effects based on close network size). Because all outcomes were count measures with little indication of overdispersion, Poisson regressions were employed.

The inverse probability weighting technique (see Hawkey et al., 2014) minimized bias caused by selective attrition. Causes for attrition included death, institutionalization, unsuccessful locating an interviewee, and relocation to a new census tract. An array of Wave 1 health and demographic variables, and initial concentrated disadvantage, predicted inclusion at Wave 2. Inverse predicted probability scores obtained through this logistic regression were multiplied by the NSHAP's standard weights before application in the analyses. Those least likely to have remained within the sample were thus weighted more heavily. Nonetheless, if those most vulnerable were less likely to have remained within the sample, attrition might have caused underestimation of how neighborhood-level declines affected close networks.

Standard errors were adjusted for census tract-level clustering. Missing data were addressed through multiple imputation using chained equations (10 imputed data sets). Only household assets and length of community residence had 10% or more missing data (13.81% and 16.99%, respectively). Over two thirds of the sample (69.87%) had no missing data. While the multiple imputation process included the dependent variables, the final analyses excluded their originally missing cases, removing 12 respondents. The analyses employed the Stata 15 statistical software package.

## Results

Table 1 displays the descriptive statistics. Because the average number of new ties (2.00) was higher than that of ties lost (1.85), average network size increased between Waves 1 (4.27) and 2 (4.41). The average respondent lost 0.33 ties (17.84% of average ties lost) to network member death.

As the concentrated disadvantage index was based on standardized items, all related variables held means of zero. Its standard deviation (*SD*) was 0.66 at Wave 1 and 0.61 at Wave 2. Change in concentrated disadvantage had an *SD* of 0.32, implying appreciable variability in sampled neighborhoods' declines.

Table 2 displays the Poisson regression results. Change in concentrated disadvantage was the focus. Model 1 shows that increasing concentrated disadvantage was associated with fewer Wave 2 ties ( $IRR = 0.906, p < .01$ ). Through Stata's "margins" command, Wave 2 network sizes were predicted based on three levels of change in concentrated disadvantage: one *SD* below the mean ( $-0.32$ ), the mean ( $0.00$ ), and one *SD* above the mean ( $0.32$ ). All other variables were held at their means. While the prediction for a change in concentrated disadvantage of  $-1$  *SD* was 4.48, that for a mean change was 4.34, and that for a change of  $+1$  *SD* was 4.20. This modest effect implies that transitioning from  $-1$  *SD* to  $+1$  *SD* in change in concentrated disadvantage was associated with a decrease in network size of slightly over a quarter of a tie (about 18.1% of the *SD* of Wave 2 network size).

Model 2 shows that increasing concentrated disadvantage was associated with fewer ties gained ( $IRR = 0.826, p < .01$ ). While the prediction of ties gained for a change in concentrated disadvantage of  $-1$  *SD* was 1.79, that for a mean change was 1.68, and that for a change of  $+1$  *SD* was 1.58. Model 3 shows an insignificant positive relationship between change in concentrated disadvantage and ties lost ( $IRR = 1.052$ ).

## Robustness Checks

Results were substantively identical when initial concentrated disadvantage was not controlled, implying that they hold regardless of initial conditions. Findings were also substantively identical with inclusion of those who relocated to a new census tract, suggesting their broad generalizability to older populations.

## Discussion

This study examined how changing neighborhood-level concentrated disadvantage is associated with close network size and turnover. Rising concentrated disadvantage is associated with smaller networks, largely due to fewer ties gained. Close network dynamics are neglected pathways through which the Great Recession affected older Americans.

The hypothesis based on social disorganization theory that declining neighborhoods prevent older residents from gaining close ties, leading to smaller close networks, was supported. The negative neighborhood-level processes emphasized within social disorganization theory impede acquisition of new weaker ties that potentially develop into strong ties (Elfring & Hulsink, 2007; Ihm & Castillo, 2017; Lorenzen, 2007) and thus correspond with scholarship showing that disadvantaged neighborhoods' residents tend to have small networks of weaker ties (see Curley, 2005; Gilchrist & Kyprianou, 2011; MacDonald et al., 2005).

These processes compound older persons' general difficulties in establishing new close ties. New close ties yield specific later life benefits, including expansion of advantageous influences and social support, upholding of self-regard and social integration, and maintenance of physical, cognitive, and social activity (Cornwell & Laumann, 2015; Kemp et al., 2012). These benefits might be especially important after involuntary trimming of older persons' close networks.

Contrary to what was hypothesized, rising concentrated disadvantage did not increase ties lost. Relatedly, disadvantaged neighborhoods' residents often have many strong and durable ties characterized by mutual obligations (see Curley, 2005; Gilchrist & Kyprianou, 2011; MacDonald et al., 2005; Stack, 1974). Furthermore, socioemotional selectivity theory (Carstensen, 1992; Charles & Carstensen, 2010) suggests that declining communities' older residents might safeguard their current close ties while losing the motivation to gain new ones.

The findings present causes for optimism. Older adults' earlier strong ties show resilience against neighborhood declines. Furthermore, average number of ties rose over time, because of more ties gained than lost. Despite obstacles, many older persons succeed in replacing lost ties.

The COVID-19 pandemic's effects upon social distancing make this study timely. Because of constrained health care access, decaying and overcrowded housing and community settings, and prevalence of poorly paid employment that cannot be performed remotely while not providing health insurance nor paid sick leave, COVID-19 is disproportionately affecting poorer neighborhoods (Borjas, 2020). Especially because of their greater vulnerability, older residents of disadvantaged neighborhoods might display intensified social distancing. The processes and consequences here discussed might be pronounced in this context.

Furthermore, within this context, acquiring new ties and strengthening weaker ties might be increasingly dependent

**Table 1.** Descriptive Statistics ( $N = 1,776$ ).

Variables	M/proportion (%)	SD
Dependent variables		
Number of ties-W1	4.27	1.57
Number of ties-W2	4.41	1.55
Ties gained	2.00	1.47
Ties lost	1.85	1.42
Ties lost through death	0.33	0.61
Independent and control variables		
Census tract level		
Change in concentrated disadvantage	0.00	0.32
Concentrated disadvantage-W1	0.00	0.66
Concentrated disadvantage-W2	0.00	0.61
Located in an MSA	70.77%	
Logged population density-W1 (persons per square mile)	7.02	1.99
Proportion having changed residences within the previous 5 years-W1	0.43	0.11
Individual level		
Women	51.31%	
Age/10-W1	6.83	0.74
White	70.89%	
African American	16.49%	
Latino	10.32%	
Other	2.30%	
Married-W1	65.01%	
Living with a partner	1.96%	
Separated	1.29%	
Divorced	10.01%	
Widowed	18.73%	
Never married	3.02%	
Number of years lived in local area-W1	23.97	17.02
No high school diploma	22.54%	
High school diploma	53.24%	
University degree	24.22%	
Working for pay-W1	34.84%	
Retired	53.30%	
Not working for reasons other than retirement	11.86%	
Logged total household assets-W1	11.85	2.37
Higher physical health-W1 (1–5)	3.33	1.06
Functional health problems-W1 (0–3)	0.13	0.30
Index of depressive symptoms-W1	0.00	0.56
Proportion of network composed of relatives-W1	0.69	0.29
Average frequency of contact with network members-W1 (1–8)	6.82	0.80
Average closeness with network members-W1 (1–4)	3.14	0.48
Attends religious services once or more per week-W1	50.14%	
Once per month	9.76%	
Less than once per year to several times per year	23.61%	
Never	16.49%	

Note. W1 = Wave 1; W2 = Wave 2; MSA = metropolitan statistical area.

on online communications. More generally, the internet might be especially valuable for older persons' close networks (Barbosa Neves et al., 2019). Less internet access within disadvantaged neighborhoods (Mossberger et al., 2012) might aggravate the processes here discussed.

## Conclusion

The results show how rising neighborhood-level concentrated disadvantage adversely affects older persons' close networks, based mostly on fewer new ties. Close network

**Table 2.** Poisson Regressions of Number of Close Network Ties and Close Network Turnover, Incidence-Rate Ratios.

Variables	(1) <sup>a</sup>	(2) <sup>a</sup>	(3) <sup>b</sup>
	Number of Ties	New Ties	Ties Lost
Change in census tract–level concentrated disadvantage	0.906** (0.030)	0.826** (0.057)	1.052 (0.060)
Census tract–level concentrated disadvantage-WI	0.968 (0.025)	0.949 (0.053)	1.011 (0.044)
Census tract located in an MSA	1.005 (0.023)	0.989 (0.063)	0.979 (0.040)
Census tract–level logged population density-WI	0.999 (0.006)	0.991 (0.017)	0.995 (0.010)
Census tract–level residential instability-WI	1.023 (0.096)	1.188 (0.256)	1.095 (0.175)
Number of years lived in local area-WI	1.000 (0.001)	0.998 (0.001)	0.999 (0.001)
Women (ref. men)	1.068*** (0.020)	1.087 <sup>^</sup> (0.052)	0.972 (0.032)
Age/10-WI	0.978 (0.014)	1.028 (0.035)	1.054* (0.023)
African American (ref. White)	0.977 (0.036)	1.139 <sup>^</sup> (0.082)	1.153* (0.065)
Latino	1.030 (0.033)	1.148 (0.104)	1.005 (0.063)
Other race/ethnicity	1.040 (0.060)	1.273* (0.140)	1.157 (0.127)
Living with a partner-WI (ref. married)	0.953 (0.081)	0.778 (0.128)	0.966 (0.118)
Separated	0.986 (0.090)	1.136 (0.300)	1.137 (0.178)
Divorced	0.960 (0.032)	1.010 (0.077)	1.099 <sup>^</sup> (0.054)
Widowed	0.971 (0.024)	0.936 (0.055)	1.020 (0.043)
Never married	0.971 (0.056)	0.877 (0.098)	0.888 (0.075)
High school diploma (ref. no high school diploma)	1.069* (0.030)	0.994 (0.063)	0.900** (0.031)
University degree	1.040 (0.034)	0.874 <sup>^</sup> (0.066)	0.879** (0.038)
Retired-WI (ref. working for pay)	1.025 (0.021)	0.917 <sup>^</sup> (0.046)	0.920* (0.033)
Not working for reasons other than retirement	0.913** (0.031)	0.787** (0.062)	1.035 (0.053)
Logged total household assets-WI	1.007 (0.006)	1.012 (0.014)	1.000 (0.009)
Higher physical health-WI (1–5)	1.005 (0.011)	0.993 (0.024)	0.987 (0.015)
Functional health problems-WI (0–3)	1.024 (0.043)	1.008 (0.094)	0.978 (0.069)
Depressive symptoms-WI	1.000 (0.025)	1.022 (0.062)	1.041 (0.038)
Proportion of network composed of relatives-WI	0.940 <sup>^</sup> (0.033)	0.536*** (0.043)	0.624*** (0.037)
Average frequency of contact with network members-WI (1–8)	1.029* (0.013)	0.947 <sup>^</sup> (0.027)	0.891*** (0.019)
Average closeness with network members-WI (1–4)	1.021 (0.022)	0.890* (0.044)	0.851*** (0.029)
Attends religious services about once per month-WI (ref. once or more per week)	1.014 (0.029)	0.948 (0.065)	0.987 (0.046)
Less than once per year to several times per year	0.982 (0.022)	0.842** (0.046)	0.895** (0.034)
Never	0.925** (0.027)	0.770*** (0.053)	0.918 <sup>^</sup> (0.044)
Constant	2.441*** (0.474)	3.347** (1.492)	1.701 <sup>^</sup> (0.496)
Number of respondents	1,776	1,776	1,776

Note. Robust standard errors (exponentiated form) in parentheses. WI = Wave 1; W2 = Wave 2; MSA = metropolitan statistical area.

<sup>a</sup>WI number of close ties (dummy variable categories) was controlled. <sup>b</sup>Included WI number of close ties as exposure term.

<sup>^</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$  (two-tailed tests).

dynamics are important but neglected means through which contexts affect residents. Times of broad despair, such as the Great Recession, might aggravate these effects, which might be most severe for vulnerable populations, including older persons.

### Policy Implications

This study suggests that investing resources in neighborhood institutions that maintain community social capital might help older persons and communities remain strong during economic shocks. Feld (1981) discussed the significance of such social foci, including senior centers, exercise facilities, lawn bowling clubs, hobby groups, and coffee shops, for the development of

new strong social ties. This might be especially important for older residents of declining neighborhoods.

### Limitations and Paths for Future Research

A minority (17.84%) of lost close ties were due to network members' deaths. The neighborhood-level processes that affect mortality might differ from those here analyzed and are beyond this study's scope. Future research should address this topic.

This study's focus is the short-term effects of the Great Recession. As neighborhoods change gradually, a longer timespan might reveal the full effects upon close networks, which might include significantly more ties lost.

A further limitation is that this study considers only the presence of close ties. Future research should study how qualities of ties, including frequency of contact and emotional closeness, change through neighborhood-level declines.

Future research should study connections specifically among neighbors confronting the same neighborhood changes. This research might reveal whether declining communities erode neighborly ties or lead neighbors to band together.

### Author's Note

No ethical permissions were required because all analyses are based on secondary data.

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### References

- Aneshensel, C. S. (2009). Neighborhood as a social context of the stress process. In W. R. Avison, C. S. Aneshensel, S. Schieman, & B. Wheaton (Eds.), *Advances in the conceptualization of the stress process* (pp. 35–52). Springer.
- Ansari, S. (2013). Social capital and collective efficacy: Resource and operating tools of community social control. *Journal of Theoretical and Philosophical Criminology*, 5(2), 75–94.
- Barbosa Neves, B., Franz, R., Judges, R., Beermann, C., & Baecker, R. (2019). Can digital technology enhance social connectedness among older adults? A feasibility study. *Journal of Applied Gerontology*, 38(1), 49–72.
- Borjas, G. J. (2020). *Demographic determinants of testing incidence and COVID-19 infections in New York City neighborhoods* (No. w26952). National Bureau of Economic Research.
- Börsch-Supan, A., & Schuth, M. (2013). Early retirement, mental health and social networks. In A. Börsch-Supan, M. Brandt, H. Litwin, & G. Weber (Eds.), *Active ageing and solidarity between generations in Europe: First results from SHARE after the economic crisis* (pp. 337–348). de Gruyter.
- Brady, S., D'Ambrosio, L. A., Felts, A., Rula, E. Y., Kell, K. P., & Coughlin, J. F. (2020). Reducing isolation and loneliness through membership in a fitness program for older adults: Implications for health. *Journal of Applied Gerontology*, 39(3), 301–310.
- Carstensen, L. L. (1992). Social and emotional patterns in adulthood. *Psychology and Aging*, 7(3), 331–338.
- Charles, S., & Carstensen, L. (2010). Social and emotion. *Annual Review of Psychology*, 61, 383–409.
- Cherry, K. E., Walker, E. J., Brown, J. S., Volaufova, J., Lamotte, L. R., Welsh, D. A., Su, L. J., Jazwinski, S. M., Ellis, R., Wood, R. H., & Frisard, M. I. (2013). Social engagement and health in younger, older, and oldest-old adults in the Louisiana Healthy Aging Study. *Journal of Applied Gerontology*, 32(1), 51–75.
- Cornwell, B. (2009). Good health and the bridging of structural holes. *Social Networks*, 31(1), 92–103.
- Cornwell, B. (2015). Social disadvantage and network turnover. *Journals of Gerontology—Series B Psychological Sciences and Social Sciences*, 70(1), 132–142.
- Cornwell, B., & Laumann, E. O. (2011). Network position and sexual dysfunction: Implications of partner betweenness for men. *American Journal of Sociology*, 117(1), 172–208.
- Cornwell, B., & Laumann, E. O. (2015). The health benefits of network growth: New evidence from a national survey of older adults. *Social Science and Medicine*, 125, 94–106.
- Cornwell, B., Laumann, E. O., & Schumm, L. P. (2008). The social connectedness of older adults: A national profile. *American Sociological Review*, 73(2), 185–203.
- Curley, A. M. (2005). Theories of urban poverty and implications for public housing policy. *Journal of Sociology and Social Welfare*, 32(2), 97–119.
- DeSena, J. N. (2006). “What’s a mother to do?” Gentrification, school selection, and the consequences for community cohesion. *American Behavioral Scientist*, 50(2), 241–257.
- Elfring, T., & Hulsink, W. (2007). Networking by entrepreneurs: Patterns of tie-formation in emerging organizations. *Organization Studies*, 28(12), 1849–1872.
- Estabrooks, P. A., Lee, R. E., & Gyurcsik, N. C. (2003). Resources for physical activity participation: Does availability and accessibility differ by neighborhood socioeconomic status? *Annals of Behavioral Medicine*, 25(2), 100–104.
- Feld, S. L. (1981). The focused organization of social ties. *American Journal of Sociology*, 86(5), 1015–1035.
- Finkel, S. E. (1995). *Causal analysis with panel data* (No. 105). Sage.
- Gilchrist, A., & Kyprianou, P. (2011). *Social networks, poverty and ethnicity* [Programme paper]. Joseph Rowntree Foundation, York.
- Glass, T. A., & Balfour, J. L. (2003). Neighborhoods, aging, and functional limitations. In I. Kawachi & L. Berkman (Eds.), *Neighborhoods and health* (pp. 303–334). Oxford University Press.
- Greenfield, E. A., & Russell, D. (2011). Identifying living arrangements that heighten risk for loneliness in later life: Evidence from the U.S. national social life, health, and aging project. *Journal of Applied Gerontology*, 30(4), 524–534.



- Hawkey, L. C., Kocherginsky, M., Wong, J., Kim, J., & Cagney, K. A. (2014). Missing data in Wave 2 of NSHAP: Prevalence, predictors, and recommended treatment. *Journals of Gerontology—Series B Psychological Sciences and Social Sciences*, *69*, S38–S50.
- Idler, E. L., & Benyamini, Y. (1997). Self-rated health and mortality: A review of twenty-seven community studies. *Journal of Health and Social Behavior*, *38*(1), 21–37.
- Ihm, J., & Castillo, E. A. (2017). Development and transformation of collaborative networks in events. *Journal of Convention and Event Tourism*, *18*(3), 205–224.
- Kasarda, J. D., & Janowitz, M. (1974). Community attachment in mass society. *American Sociological Review*, *328–339*.
- Kemp, C. L., Ball, M. M., Hollingsworth, C., & Perkins, M. M. (2012). Strangers and friends: Residents' social careers in assisted living. *Journals of Gerontology—Series B Psychological Sciences and Social Sciences*, *67B*(4), 491–502.
- Kim, J. (2010). Neighborhood disadvantage and mental health: The role of neighborhood disorder and social relationships. *Social Science Research*, *39*(2), 260–271.
- Kneebone, E., & Holmes, N. (2016). U.S. concentrated poverty in the wake of the Great Recession. *Brookings Institute*. <https://www.brookings.edu/research/u-s-concentrated-poverty-in-the-wake-of-the-great-recession/>
- Krinsky, J., & Crossley, N. (2014). Social movements and social networks: Introduction. *Social Movement Studies*, *13*(1), 1–21. Taylor & Francis.
- Lawton, M. P., & Nahemow, L. (1973). *Ecology and the aging process*. American Psychological Association.
- Lerman, R. I., & Zhang, S. (2012). *Coping with the Great Recession: Disparate impacts on economic well-being in poor neighborhoods* (pp. 1–20). The Urban Institute.
- Lorenzen, M. (2007). Social capital and localised learning: Proximity and place in technological and institutional dynamics. *Urban Studies*, *44*(4), 799–817.
- MacDonald, R., Shildrick, T., Webster, C., & Simpson, D. (2005). Growing up in poor neighbourhoods: The significance of class and place in the extended transitions of “socially excluded” young adults. *Sociology*, *39*(5), 873–891.
- Meltzer, J., Steven, D., & Langley, C. (2013). *The United States after the Great Recession: The challenge of sustainable growth* (pp. 1–58). Global Economy and Development at Brookings.
- Mossberger, K., Tolbert, C. J., Bowen, D., & Jimenez, B. (2012). Unraveling different barriers to internet use: Urban residents and neighborhood effects. *Urban Affairs Review*, *48*(6), 771–810.
- Owens, A. N. N., & Sampson, R. J. (2013, Spring). Community well-being and the Great Recession. *Pathways*, *3–7*.
- Radloff, L. S. (1977). A self-report depression scale for research in the general population. *Applied Psychological Measurement*, *1*(3), 385–401.
- Rook, K. S. (2009). Gaps in social support resources in later life: An adaptational challenge in need of further research. *Journal of Social and Personal Relationships*, *26*(1), 103–112.
- Salomon, J. A., Nordhagen, S., Oza, S., & Murray, C. J. L. (2009). Are Americans feeling less healthy? the puzzle of trends in self-rated health. *American Journal of Epidemiology*, *170*(3), 343–351.
- Sampson, R. J. (2012). *Great American city: Chicago and the enduring neighborhood effect*. University of Chicago Press.
- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, *277*(5328), 918–924.
- Schaefer, D. R., Kornienko, O., & Fox, A. M. (2011). Misery does not love company: Network selection mechanisms and depression homophily. *American Sociological Review*, *76*(5), 764–785.
- Shin, O., Park, S., Amano, T., Kwon, E., & Kim, B. R. (2019). Nature of retirement and loneliness: The moderating roles of social support. *Journal of Applied Gerontology*. Advance online publication. <https://doi.org/10.1177/0733464819886262>
- Sluzki, C. E. (2010). Personal social networks and health: Conceptual and clinical implications of their reciprocal impact. *Families, Systems and Health*, *28*(1), 1–18.
- Smith, G. R., Monson, R. A., & Ray, D. C. (1986). Patients with multiple unexplained symptoms: Their characteristics, functional health, and health care utilization. *Archives of Internal Medicine*, *146*(1), 69–72.
- Snijders, T. A. B., & Doreian, P. (2010). Introduction to the special issue on network dynamics. *Social Networks*, *32*(1), 1–3.
- Solari, C. D. (2012). Affluent neighborhood persistence and change in U.S. cities. *City and Community*, *11*(4), 370–388.
- Stack, C. B. (1974). *All our kin*. Basic Books.
- Steger, M. F., & Kashdan, T. B. (2010). NIH public access. *Journal of Consulting Psychology*, *56*(2), 289–300.
- United States Census Bureau. (2010). *Geographic terms and concepts—census tract*. [https://www2.census.gov/geo/pdfs/reference/GTC\\_10.pdf](https://www2.census.gov/geo/pdfs/reference/GTC_10.pdf)
- Van Eijk, G. (2010). Does living in a poor neighbourhood result in network poverty? A study on local networks, locality-based relationships and neighbourhood settings. *Journal of Housing and the Built Environment*, *25*(4), 467–480.
- York Cornwell, E., & Behler, R. L. (2015). Urbanism, neighborhood context, and social networks. *City & Community*, *14*(3), 311–335.